



SKILLSHEET 11.2

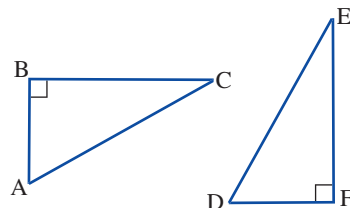
Corresponding sides of congruent and similar triangles

Congruent triangles have exactly the same shape and size. In congruent triangles, corresponding sides are the ones with the same length and corresponding angles are those of the same size.

WORKED EXAMPLE

The two triangles shown at right are congruent.

- a Which side in $\triangle DEF$ corresponds to side AC in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side DF in $\triangle DEF$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle FDE$ in $\triangle DEF$.
- d Name the angle in $\triangle DEF$ that corresponds to $\angle ABC$ in $\triangle ABC$.



THINK

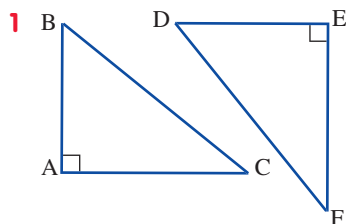
- a In $\triangle ABC$, side AC is the hypotenuse (that is, it is the longest side and is opposite the right angle). The corresponding side in $\triangle DEF$ is also the hypotenuse. State the corresponding side.
- b In $\triangle DEF$, side DF is the shorter of the two sides that are adjacent to the right-angle. Find the corresponding side in $\triangle ABC$.
- c In $\triangle DEF$, $\angle FDE$ is formed by the hypotenuse (DE) and the shorter of the two other sides (DF). The corresponding angle in $\triangle ABC$ is formed by the hypotenuse (AC) and the shorter of the other two sides (AB).
- d In $\triangle ABC$, $\angle ABC$ is right angle. State the corresponding angle in $\triangle DEF$.

WRITE

- a Side AC corresponds to side DE .
- b Side DF corresponds to side AB .
- c $\angle FDE$ corresponds to $\angle BAC$.
- d $\angle ABC$ corresponds to $\angle EFD$.

Try these

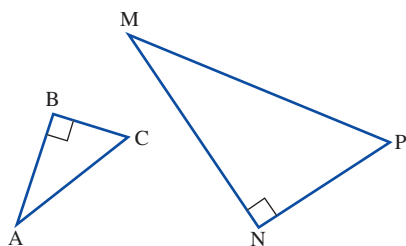
In each of the following questions, the triangles shown are congruent.



- a Which side in $\triangle DEF$ corresponds to side AC in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side DF in $\triangle DEF$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle FDE$ in $\triangle DEF$
- d Name the angle in $\triangle DEF$ that corresponds to $\angle BAC$ in $\triangle ABC$

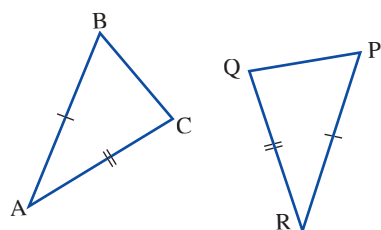


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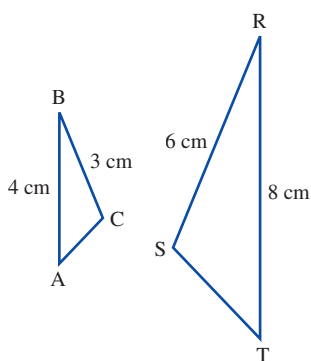
- a Which side in $\triangle MNP$ corresponds to side AC in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side NP in $\triangle MNP$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle PMN$ in $\triangle MNP$
- d Name the angle in $\triangle MNP$ that corresponds to $\angle ABC$ in $\triangle ABC$

3

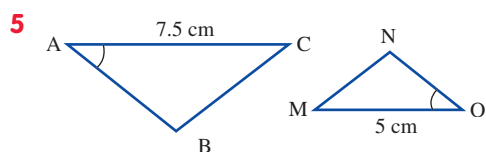


- a Which side in $\triangle PQR$ corresponds to side BC in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side PR in $\triangle PQR$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle QRP$ in $\triangle PQR$
- d Name the angle in $\triangle PQR$ that corresponds to $\angle ABC$ in $\triangle ABC$

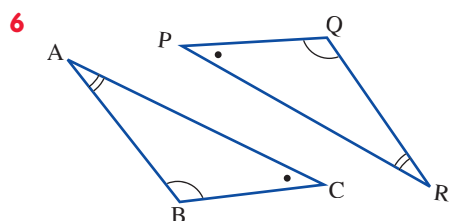
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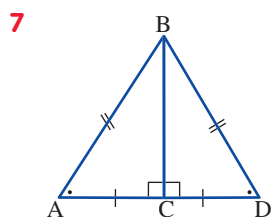
- a Which side in $\triangle RST$ corresponds to side AC in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side RS in $\triangle RST$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle RST$ in $\triangle RST$
- d Name the angle in $\triangle RST$ that corresponds to $\angle ABC$ in $\triangle ABC$



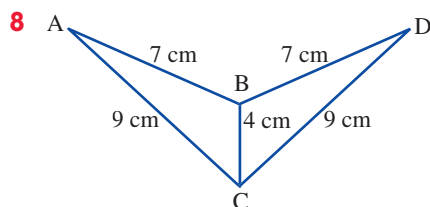
- a Which side in $\triangle MNO$ corresponds to side AB in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side MN in $\triangle MNO$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle MNO$ in $\triangle MNO$
- d Name the angle in $\triangle MNO$ that corresponds to $\angle ACB$ in $\triangle ABC$



- a Which side in $\triangle PQR$ corresponds to side AB in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side PR in $\triangle PQR$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle PQR$ in $\triangle PQR$
- d Name the angle in $\triangle PQR$ that corresponds to $\angle BAC$ in $\triangle ABC$



- a Which side in $\triangle DBC$ corresponds to side BC in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side CD in $\triangle DBC$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle DBC$ in $\triangle DBC$
- d Name the angle in $\triangle DBC$ that corresponds to $\angle BCA$ in $\triangle ABC$



- a Which side in $\triangle DBC$ corresponds to side AC in $\triangle ABC$?
- b Which side in $\triangle ABC$ corresponds to side BD in $\triangle DBC$?
- c Name the angle in $\triangle ABC$ that corresponds to $\angle DBC$ in $\triangle DBC$
- d Name the angle in $\triangle DBC$ that corresponds to $\angle CAB$ in $\triangle ABC$

SKILLSHEET — ANSWERS

SKILLSHEET 11.2

Corresponding sides of congruent and similar triangles

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|---|-------------|-------------|-----------------------|-----------------------|
| 1 | a EF | b BC | c $\angle ABC$ | d $\angle DEF$ |
| 2 | a MP | b BC | c $\angle BAC$ | d $\angle MNP$ |
| 3 | a QP | b AB | c $\angle CAB$ | d $\angle RPQ$ |
| 4 | a TS | b BC | c $\angle BCA$ | d $\angle TRS$ |
| 5 | a ON | b CB | c $\angle CBA$ | d $\angle OMN$ |
| 6 | a RQ | b CA | c $\angle CBA$ | d $\angle QRP$ |
| 7 | a BC | b CA | c $\angle ABC$ | d $\angle BCD$ |
| 8 | a DC | b BA | c $\angle ABC$ | d $\angle CDB$ |